

**From:** EPAResearchCompass [EPAResearchCompass@epa.gov]  
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**To:** ORD-ALL Feds and NonFeds and RSLs [ORD-ALL\_Feds\_and\_NonFeds\_and\_RSLs@epa.gov]  
**CC:** Klinger, Adam [Klinger.Adam@epa.gov]; Liljegren, Jennifer [Liljegren.Jennifer@epa.gov]; Pollard, Solomon [Pollard.Solomon@epa.gov]; Clarage, Meredith [Clarage.Meredith@epa.gov]; Fan, Shirley [Fan.Shirley@epa.gov]; Crk, Tanja [Crk.Tanja@epa.gov]; Scalise, Laura [Scalise.Laura@epa.gov]; MaGowan, Maricruz [MaGowan.Maricruz@epa.gov]; Braverman, Carole [braverman.carole@epa.gov]; Choi, Christopher [choi.christopher@epa.gov]; Schupp, George [schupp.george@epa.gov]; Persoon, Carolyn [persoon.carolyn@epa.gov]; Sauerhage, Maggie [Sauerhage.Maggie@epa.gov]; Batka, Sheila [Batka.Sheila@epa.gov]; Spence, Sandra [Spence.Sandra@epa.gov]; Peffers, Mel [Peffers.Mel@epa.gov]  
**Subject:** Weekly Compass: January 19, 2021



Weekly Update: 1/19/2021

Welcome to the Weekly Compass, your gateway to information about recent and upcoming ORD activities. If you have ideas for the Weekly Compass, please send them to the editors. To see past issues, visit the Weekly Compass archive on ORD@work.

**Weekly Note from Jennifer**  
ORDers-

I hope you had a restful long weekend. If you were able to participate in the MLK Jr. Day of Service to honor the life and legacy of the Reverend Dr. Martin Luther King Jr., thank you.

Per the note from the Associate Deputy Administrator, all EPA facilities will remain in their current phase until the next review on Thursday, February 18, 2021. For more information, the [EPA Facility Status Dashboard](#) will continue to be updated every Thursday, and we encourage all employees to stay informed about the status of your local commuting area and keep checking for updates on the [COVID-19 intranet site](#).

Do you have ideas about how we could do things better in ORD? We are always collecting and working on Ideas Implemented (big and small!) as part of our ELMS effort. ORD employees can easily submit ideas implemented on the [Idea Implementation Input](#) page.

A reminder that DC folks will be off tomorrow for the Inauguration of our 46<sup>th</sup> President of the United States. I hope to "see" you all at our ORD All Hands on Thursday.

--Jennifer

## Quick Updates

- Share Your Work via our @EPAresearch Social Media! Wish the public understood how your work in ORD supports the agency's mission? Share a behind-the-scenes look at how you conduct your research, your community engagement or outreach, or how partnerships are helping us advance environmental protection. Help us tell the ORD story via our [@EPAresearch Twitter](#) and [Facebook](#) accounts.

To get started, please reach out to Melissa Anley-Mills and Bailey Stearns. They will work with you and your Communications Director to craft social media content that can help tell the ORD story.

- #WearRedDay for American Heart Month. If you would like to participate, please send a photo of yourself wearing red to Melissa Anley-Mills and Bailey Stearns to be featured on our Twitter and Facebook on February 5<sup>th</sup> for Wear Red Day!
- Know a K-12 student who is setting an environmental stewardship example for their community? Encourage them to apply for our [President's Environmental Youth Award \(PEYA\)](#) by February 19. Questions? Email: [peya@epa.gov](mailto:peya@epa.gov)
- Know a K-12 teacher using environmental education to set an example for their students and inspire their learning? Encourage them to apply for our [Presidential Innovation Award for Environmental Educators \(PIAEE\)](#) by February 19. Questions? Email: [piaee@epa.gov](mailto:piaee@epa.gov)
- To donate or to pledge volunteer hours to support CFC charities, please visit the [CFC donation portal](#). For more information, visit the [EPA CFC intranet site](#).
- EPA is partnering with the Treasury Executive Institute (TEI) to offer [coaching and learning activities](#) for agency leaders.
- The [ORD@Work ELMS homepage](#) is a great place to visit for a wide range of ELMS related information. Visit the ["ELMS Efforts" page](#) for reflections on our FY20 ELMS successes, submit ideas implemented on the ["Idea Implementation Input" page](#).
- The [50<sup>th</sup> anniversary store](#) is now live!
- Upcoming webinars:
  - [1/20, 2PM ET: Depackaging & Commercial Composting – An Integrated System for Organics Recycling](#)

- 1/21, 2PM ET: [Homeland Security Research Webinar Series--COVID-19: UV-C Devices and Methods for Surface Disinfection](#)
- 1/27, 3PM ET: [EPA Tools and Resources Webinar: Effectiveness of Medical and Cloth Masks for COVID-19 Protection](#)
- 1/27, 3pm: [Social-environmental Science Exchange: Environmental Justice Mapping and Cumulative Impact Strategies](#) (VPN connection required)
- 1/28, 11AM ET: [Computational Toxicology Communities of Practice: The Tox21 10K Compound Library: Collaborative Chemistry Advancing Toxicology](#)
- 1/28, 1PM ET: [Webinar--Communicating Air Quality During Fires: the Science Behind the AirNow Sensor Data Pilot](#)
- 1/28, 12PM ET: [SERDP & ESTCP Webinar: Improved Approaches for PFAS Sampling and Treatment](#)

Faces of ORD: CPHEA's Steven Prince

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## In the Lab:

### Monitoring CoV-2 Virus Variants in Wastewater being Planned

The emergence of more highly infectious types of the SARS-CoV-2 has raised interest in evaluating the wastewater RNA signal for an unbiased, inexpensive estimate of the diversity of SARS-CoV-2 variants circulating in the community. CESER is actively developing plans to begin high-throughput sequencing of Ohio wastewater samples using our own equipment and experience in wastewater metagenomics. The Ohio Department of Health is very interested in this data, and the Ohio network of labs (including EPA-ORD) have implemented a pilot sequencing study of selected sites across the state, and submitted a proposal in response to a recent CDC BAA to fund longer-term monitoring.

### Technical Support to AOAC Validation of SARS-CoV-2 Detection Kits

CESER's Dr. Sanjiv Shah served as an expert reviewer for the [Association of Official Analytical Collaboration \(AOAC\) International's Emergency Response Validation of Molecular Methods and Test-Kits that detect SARS CoV-2 on environmental surfaces](#). The successful methods are granted Emergency Use Performance Tested Method<sup>SM</sup> status.

### Evaluating Application of Disinfectants for SARS-CoV-2

CESER researchers are continuing to evaluate disinfection methods. Electrostatic spraying has drawn increased interest because of the need to disinfect large indoor spaces (e.g., schools, offices, businesses) or areas with many surfaces. Unlike conventional spraying methods, electrostatic sprayers apply a positive charge to liquid disinfectants as they pass through the nozzle. The positively charged disinfectant attract to negatively charged surfaces, which allows for efficient coating of hard nonporous surfaces. Recently, researchers conducted tests to evaluate the loss of volatile, active

ingredients in the liquid disinfectant due to spraying, aiming to determine if the volatilization reduces disinfection effectiveness, and to assess potential exposure or inhalation concerns. Last week, the researchers evaluated loss of hydrogen peroxide as the active ingredient; the results showed minimal loss of the peroxide after collecting liquid at a 3-ft spray distance and minimal generation of hydrogen peroxide in the air (< 1 ppm). Researchers plan to inform stakeholders on the effectiveness and safety of these application methods.

#### **National Nanotechnology Initiative Stakeholder Workshop**

The 2021 National Nanotechnology Initiative (NNI) Stakeholder Workshop took place last week. Over the past 20 years, the NNI has supported nanotechnology discovery, development, and deployment, and has nurtured the strong ecosystem that exists today. Building on this foundation, nanoscience will underpin a wide range of advanced technologies and enable solutions to challenges into the future. Conversations at this workshop identified effective mechanisms to advance research and development, strategies for communication, and priority topics to shape future directions. EPA continues to be an active member of the NNI and has a leadership role in furthering understanding of the toxicity and exposure of nanomaterials and products, and the characterization of nano materials in consumer products.

#### **Ecological Risk Assessment Forum**

Last week, SHC Associate NPD Charles Maurice participated in two Ecological Risk Assessment Forum (ERAF) workgroup meetings, one on ecological screening values and the other on ecosystem goods and services. The former addressed drafting a paper for the Integrated Environmental Assessment and Management Journal. This will be based on a poster presented at the Society of Environmental Toxicology and Chemistry meeting in November, on ecological screening values for surface water, sediment, and soil. The latter was the inaugural meeting of the new ERAF workgroup on ecosystem goods and services for communicating ecorisk, which has the goal of elevating appreciation for the importance of ecosystems for providing community benefits.

#### **Homeland Security Research Webinar Series Focusing on UV Disinfection and Devices**

On January 21, EPA researchers Lukas Oudejans and Katherine Ratliff will present findings from ongoing work with both LA Metro and NYC MTA to evaluate the efficacy of UV-C devices and methods for surface disinfection on the HSRP webinar series.

Registration is open and more information can be found here:

<https://www.epa.gov/emergency-response-research/homeland-security-research-webinar-series>

#### **AirNow Webinar**

On Thursday, January 28<sup>th</sup> from 1:00 pm to 3:00 pm EST, EPA will deliver a public webinar titled "Communicating Air Quality During Fires: the Science Behind the AirNow Sensor Data Pilot." The U.S. Environmental Protection Agency (EPA) and the U.S. Forest Service (USFS) conducted the AirNow Sensor Data Pilot during the 2020 fire season to provide the public with air sensor information on fine particulate matter (PM<sub>2.5</sub>), especially during smoke events from fires. The sensor data is shown on the Fire and Smoke Map, part of the popular AirNow.gov website. The air sensors are among several new additions to the Fire and Smoke Map, made possible with innovative technical approaches developed and applied by EPA to compare sensor data with data from

regulatory grade monitors and temporary monitors provided by EPA, USFS, states, tribes and local air quality agencies. This webinar will provide an overview of the AirNow Sensor Data Pilot and the development of the U.S.-wide correction equation for PurpleAir PM2.5 sensor data and its appropriateness for correcting PM2.5 measurements during smoke events. [Register here](#).

#### **CEMM Scientists Receive Training on PFAS Measuring Tool**

Last week, several CEMM/AMCD scientists received training on Combustion Ion Chromatography (CIC), a new system that will support ORD's PFAS research. The CIC will measure the Total Organic Fluorine content of liquid and solid samples collected from various sources. Then, it will combust the sample by converting any organic fluorine into an ionic form that will be collected and quantitatively measured by ion chromatography. CIC will serve as an important PFAS tool because it will allow researchers to measure total PFAS compounds as a class and it will help researchers identify and quantify targeted individual PFAS analytical approaches.

#### **CEMM and CPHEA Researchers Serve as Technical Experts to Watershed Project**

Earlier this month, CEMM's Tammy Newcomer-Johnson and CPHEA's Paul Mayer served as technical experts and advisors for the project, "Watershed effects on success of stream restoration projects for excess nitrogen mitigation." This project aims to support [new protocols](#) that the Chesapeake Bay Program recently approved for estimating nitrogen reduction for stream restoration projects that reconnect to the floodplain. The 2020-2022 project is funded by the Chesapeake Bay Trust and is led by the Center for Watershed Protection and Virginia Tech University.

#### **HSRP Briefing for ORIA's International Technical Working Group**

Researchers presented the Waste Estimation Support Tool (WEST) to the Expert Group on Recovery Management (EGRM), an effort led by the French Nuclear Energy Agency. Participants at the briefing included staff from the U.S., France, The United Kingdom, Germany, and Japan. WEST is a GIS-based decision support tool that estimates the quantity, characteristics, and residual activity of waste resulting from cleanup following wide-area radiological or biological contamination incidents. It also uses databases maintained by FEMA that include infrastructure across the country such as building footprints, construction materials, and building usage. EGRM expressed an interest in exploring the recently released (March 2020) WEST update's functionality to substitute the FEMA infrastructure databases with user-specified databases and enable WEST for use in international settings. The researchers demonstrated this functionality and discussed potential collaborations to evaluate wide-area radiological response tools developed by other EGRM members.

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### **In the Office:**

#### **Limited Access to Web of Science and Temporary Journal Subscriptions Lapse**

Access to the Web of Science, an online scientific literature and citation database that offers unique content and capabilities, is temporarily unavailable to all sites except RTP. Full access is expected in the coming weeks. In addition, due to contract delays, access may be impacted temporarily for journal subscriptions purchased by the RTP Library.

The library purchases many Agency-wide titles that are made available on the Desktop Library. Some are only available to those located in RTP and Cincinnati. If you are unable to access a needed journal article, please submit a request for an [interlibrary loan](#). If you have any questions, please contact Laura Doyle.

### American Board of Toxicology DABT Exam

At this time the American Board of Toxicology plans to hold the 2021 DABT Certification Examination on Wednesday, October 13th, 2021. Since 2017, certification has been largely based on the practical application of toxicology (i.e., regulatory toxicology and risk assessment). Additional details regarding the ABT and the Certification Exam are available at [www.abtox.org](http://www.abtox.org).

If you are interested in sitting for the exam or simply seeking training in the basic principles of toxicology, the ABT 2021 Study Group will start meeting January 25th via Zoom for subject matter review (based on Casarett and Doull's Toxicology: The Basic Science of Poisons, 9th ed.). The total expected time to devote to the study group is 4-8 hours per week, depending on your level of expertise and personal learning objectives. Each participant is expected to cover at least one of the topics, using and/or modifying currently available materials. On Mondays, the group will meet for a 1 hour lecture. On Fridays, the group will meet to review the week's material, practice questions, practice exams, etc. Both meeting times will be accessible via Zoom from 1-2PM.

To join the study group, please:

1. Seek approval from your supervisor
  2. Send your personal, non-government email address to [abtstudygroup@gmail.com](mailto:abtstudygroup@gmail.com)
- Please feel free to share this information with your colleagues.

### OSIM to Conduct Meetings with ORD Researchers

OSIM will be conducting collaborative meetings with ORD researchers in the next few months to improve the research environment by creating innovative information technology (IT) projects.

The goal of the meetings is to identify inefficiencies in workflow, tools or missing capabilities, and to continue to build relationships. The type of questions that may be asked during the meetings include:

1. What does your research workflow look like?
2. What are some IT challenges that you face in your work?
3. What are some IT changes that can make your work more efficient?
4. Are there any tools, services, or capabilities that you feel would benefit your work?

This initiative was started to ensure researchers have the resources needed to keep up with the always changing research environment and to adhere to the [Evidence Act](#), a mandate which requires a greater emphasis on our data management capabilities at the EPA.

By building a better research environment, researchers can continue to do the best work of their careers and do so efficiently. This means more work can be done to protect human health and the environment. If anyone is interested in taking part in OSIM's upcoming discussions about researchers' workflow, please [click here](#).

### COVID-19 Response Resources

As a resource for staff, the following information is repeated from previous weeks.

- The agency Coronavirus Disease 2019 (COVID-19) Guidance and Information site is available as a resource for employees on a variety of topics.
- The main page compiles agency communications about COVID-19, as well as guidance from the Office of Management and Budget and the Office of Personnel Management.
- The EPA FAQs are updated regularly and provide information on a range of topics, including telework, SEE enrollee and ORISE participant telework, retirement and separation from the agency during the COVID-19 response, and the onboarding process.
- An app and website have been developed to help users understand what to do next about COVID-19. The tool provides CDC recommendations on next steps including guidance on social distancing and self-isolating, how to closely monitor symptoms, recommendations on testing, and when to contact a medical provider. Employees can visit the Apple App Store and download the Apple COVID-19 App to their personal Apple devices or visit the website.

As part of their online COVID-19 resources, CDC provides a website with helpful information for identifying and managing stress during this time as well as seeking help from a crisis helpline.

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## Accolades:

### CPHEA Researcher is Candidate for Society of Toxicology (SOT) Council

The SOT Nominating Committee selected CPHEA's Dr. Shaun D. McCullough as one of four candidates for this year's society-wide officer election. Since joining EPA, Shaun has served as President of SOT's Molecular and Systems Biology Specialty Section, Chair of its Career Resources and Development Committee, and Chair of several scientific sessions and continuing education courses. He also has been actively involved in a broad range of mentoring, outreach, and education activities through the Society. SOT Full Members can vote for SOT leadership through February 1<sup>st</sup> here: <https://www.toxicology.org/application/ms/2021Ballota.aspx>.

### Water Researchers Recognized by American Water Works Association (AWWA), Again!

AWWA's *Water Science* named a CESER publication in the list of top ten most-read articles for 2019 and now, again in 2020! Lead researchers Jennifer Tully, Mike DeSantis, and Mike Schock co-authored the paper published in 2019, "Water quality–pipe deposit relationships in Midwestern lead pipes." This paper found that less than half of the lead service lines examined contained lead scales that matched model predictions. This information challenged theoretical predictions of the release of lead in drinking water and demonstrated the value of field investigations of pipe materials when making decisions about corrosion control treatment in communities.

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## In the news:

### Listen to the Agents of Change in Environmental Health Podcast series Featuring OSAPE's Dana Williamson!

Dana Williamson is an ASPPH Environmental Health Fellow in OSAPE currently working with the Scientific Integrity Program on projects related to culture change and program evaluation. She was recently featured on the Environmental Health News Agents of

Change in Environmental Health podcast series. Dana is part of the current cohort of [Agents of Change fellows](#), a partnership with Environmental Health News and the George Washington University Milken Institute School of Public Health to amplify the voices of next generation environmental health and justice leaders. In the podcast, she talks about her upbringing in downtown Detroit, challenging days working as an EMT, and her work on both the academic and government sides of health research. [Listen to the podcast here.](#)

### Region 2 Press Release for Radon Action Month Highlights RARE and RSTIP Projects

In support of Radon Action Month, Mindy Pensak (Region 2 RSL) and Region 2 staff developed a press release, "EPA Embarks on Innovative Research Projects to Reduce Radon Risk in Puerto Rico," which highlights the [FY19 RSTIP project, "New Test Method for Community Mapping of Radon in Puerto Rico,"](#) and the [FY21 RARE project, "Expanding the Scale of Radon Measurement and Mitigation Techniques in Puerto Rico."](#)

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## In the Community:

### Tribal Lead (Pb) Curriculum Train-the-Trainer Webinars

Last week, EPA, in partnership with the National Tribal Toxics Council and the National-EPA Tribal Science Council, hosted two train-the-trainer webinars with tribal partners on the new tribal lead curriculum, [Lead Awareness in Indian Country: Keeping our Children Healthy!](#) The webinar trained community leaders to understand the purpose of the curriculum and its components, learn key actions to reduce childhood lead exposure, learn how to navigate materials, discuss teaching and outreach strategies, and share and discuss best practices. OSAPE's Monica Rodia participated in the workshop as a presenter.

### Community Engagement & STEM Education Program Outreach Activities

On Thursday, CE-STEM will virtually present activities about rocks, minerals, art, and the environment to three classes of fourth grade students at W.G. Pearson Elementary School, which is a Science, Technology, Engineering, Art, and Math magnet school in Durham, NC. CEMM's Kelly Witter will also participate in a career panel organized by the Networking and Leadership Training Organization for those early in their career at the EPA.

On Friday, CE-STEM will present the virtual version of [Generate: The Game of Energy Choices](#) to students studying honors physics at Westover High School in Fayetteville, N.C.

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## Faces of ORD: CPHEA's Steven Prince





**Name:** Steven Prince

**Job/Position:** Behavioral Scientist / Sociologist

**L/C/O or Program:** CPHEA/PHESD/EB

**1. When did you start at EPA?** January 10th, 2017

**2. What do you normally do in your job day-to-day?**

I study, think about, and work with data from real world environmental conditions like pollution from wildfire smoke (Smoke Sense app), wood-burning home heating appliances (Fairbanks, AK Innovation project), and chemicals in consumer products (EPA/NIEHS field study) and the negative health consequences that have been associated with such exposures. To balance that out, I also work with green space exposure and health benefits that are conveyed related to proximity to nature (EnviroAtlas land cover metrics combined with data from surveys like the Sister Study, General Social Survey, etc). How do people perceive, interpret, and respond to the environmental conditions they experience? What would motivate them to act in ways that protect and sustain the health of human and ecological communities? How can that inform risk messaging and communication and outreach efforts?

Finally, I work on behavioral interventions and human factors. For example, together with Region 9 and Chapel Hill Human Studies Facilities colleagues, we are studying N95 respirator use (in current times, also surgical and cloth masks). Do people know how to fit these properly? What contributes to a good face mask fit and how can we maximize filtration efficiency?

**3. What have been some of your best remote working practices?**

Taking a brief outdoor walk break and having a well-stocked freezer of lunch foods.

**4. What new hobby/or old hobby have you picked up during this stretch of remote working?**

My son and I have established a morning routine to do sets of push-ups (100 total). We are like a household Ultra Stars team.

**5. If you could visit anywhere in the world you've never been, where would you go?**

Right now, I've been learning a lot about Fairbanks, Alaska. So it would be cool to "chase" the Northern Lights and experience nature there. Also, I've not been anywhere in Africa, Asia, Australia, Latin America, so there's a list that starts with polar regions and moves through continents.

**6. If you could have one superpower, what would it be?**

Electrification...of everything (not living things). But I can't have a superpower without wearing a mask first.

**7. What is your favorite film?**

No fair, that's like asking me to choose which of my children is my favorite...Star Wars and the Godfather movies (obvious), Coen brothers, Charlie Kaufman movies (eclectic), 12 Monkeys, Hunger Games, Inception, Matrix (dystopian), a Mel Brooks or Monty Python movie (comedies), the Marvel movies (superhero), and West Side Story, Guys & Dolls, Hamilton (musicals) depending on what the times call for.

**8. Describe any steps you take in your daily life to protect the environment.**

I try to select default options that have less of an environmental impact.

Transportation: Our family cars are plug-in-hybrids (Prius and Volt and will be replaced with fully electric vehicles in the future). I share information when people have questions seeing them at a public charging station.

Food: I've been vegetarian for the majority of my life. We drink soy milk and try to eat primarily plant based foods. Still working our way to the elusive compost bin in the yard.

Home: Our electric service is 50% wind energy matched by Arcadia Renewable Energy Credits. We have energy efficient heat pump HVACs with programmable thermostats, Energy Star appliances, LED bulbs, WaterSense toilets, faucets, and showerheads. Our lawnmower is electric powered. We buy Safer Choice chemical or USDA bio-based dish and hand soaps.